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CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A television set-top terminal, comprising:
a computer readable medium having computer program code means; and
means for executing said computer program code means to implement an
Application Programming Interface (API), wherein:
the API is adapted to abstract system information (SI) in a digital television
transport stream that is received by the terminal in any one of a plurality of different
formats; and
the API provides the abstracted SI in a generic format that is suitable for use by an
application at the terminal regardless of the specific format in which the SI is provided.
2. (Original) The terminal of claim 1, wherein:
the API provides a navigation function to allow the terminal to navigate among
television channels in the transport stream in accordance with the abstracted SI.
3. (Original) The terminal of claim 1, wherein:
the API provides a program guide function for implementing an electronic
program guide for television channels in the transport stream in accordance with the
abstracted SI.

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4. (Original) The terminal of claim 1, wherein:
the API provides a selection function for selection of specific television channels of the transport stream in accordance with the abstracted SI.
5. (Original) The terminal of claim 1, wherein:
the API provides a descriptor retrieval function for recovering descriptors of the SI in accordance with the abstracted SI.
6. (Original) The terminal of claim 1, wherein:
the API provides a utility function containing supporting objects, including events and exceptions, for supporting synchronous delivery of the SI to the application.
7. (Original) The terminal of claim 1, wherein:
the API provides a data function for implementing a guide to data services in the transport stream in accordance with the abstracted SI.
8. (Original) The terminal of claim 1, wherein:
the API provides a pipeline function for providing information regarding a physical delivery mechanism of the transport stream in accordance with the abstracted SI.
9. (Original) The terminal of claim 1, wherein:
the plurality of available SI formats include at least one of:
Motion Picture Experts Group (MPEG) Program Specific Information (PSI);

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Digital Video Broadcasting (DVB) System Information (SI);
Advanced Television Systems Committee (ATSC) Program and System
Information Protocol (PSIP);
Cable SI Digital Video Standard 234 of the Society of Cable and Television
Engineers; and
private SI.

10. (Original) The terminal of claim 1, further comprising:

a memory for storing the service information as the transport stream is received at the terminal; wherein:

the API provides a retrieve function call for enabling a calling application at the terminal to retrieve the service information such that SI that is available in the memory is returned essentially immediately as a direct return value, and, if the service information is not available in the memory, said retrieve function call returns an exception signaling to the calling application that the SI is to be delivered to the calling application asynchronously.

11. (Original) The terminal of claim 10, wherein:

the API provides a utility function containing supporting objects, including events and exceptions, for supporting the asynchronous delivery of the SI to the calling application.

12. (Original) The terminal of claim 1, wherein:

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the transport stream is provided in one of a plurality of available transport stream formats; and

the API abstracts the SI to provide it in a generic format that is suitable for use by the application regardless of the specific transport stream format in which the SI is provided.

13. (Original) The terminal of claim 12, wherein:

the API provides a base package having information that is generic to the available transport stream formats; and

the API is adapted for use with a separate package having information that is specific to the format of the transport stream that is received by the terminal.

14. (Original) The terminal of claim 1, wherein:

the API provides incremental retrieval of the service information by allowing a calling application at the terminal to obtain a subset of the SI that is available at the terminal, perform an analysis of the obtained SI, and retrieve additional SI if required based on the analysis.

15. (Original) The terminal of claim 14, wherein:

the additional SI is retrieved from the subset of the SI that is available at the terminal in a memory of the terminal.

16. (Original) The terminal of claim 14, wherein:

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the additional SI is retrieved from the transport stream.

17. (Original) The terminal of claim 1, wherein:

the API enables a calling application at the terminal to recover a subset of the SI in the transport stream while rejecting other SI in the transport stream that is not required by the calling application.

18. (Original) The terminal of claim 1, wherein:

the API provides a filtering function that is responsive to the abstracted SI to allow the application to specify at least one service in the transport stream in which the application is interested..

19. (Original) The terminal of claim 18, wherein:

the filtering function is adapted to filter services in the transport stream based whether the services are associated with at least one of:

- a transport stream, when services from multiple transport streams are available;
- a network;
- a bouquet;
- a satellite;
- a satellite transponder;
- a service name;
- a service/channel number;
- a favorite channel; and

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a theme.

20. (Original) The terminal of claim 1, wherein:

the API is implemented using a plurality of packages for abstracting the SI; and
different applications at the terminal include only specific ones of the packages
according to specific portions of the abstracted SI that each application requires.

21. (Original) A method for use in a television set-top terminal for processing system
information (SI) in a digital television transport stream that is received by the terminal in
any one of a plurality of different formats, comprising the steps of:

providing a computer readable medium having computer program code means;

and

executing said computer program code means to implement an Application

Programming Interface (API), wherein:

the API is adapted to abstract the system information (SI) from any one of the
plurality of different formats; and

the API provides the abstracted SI in a generic format that is suitable for use by an
application at the terminal regardless of the specific format in which the SI is provided.